

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

PROJECT MAC

Artificial Intelligence Memo. No. 134
Vision Memo.

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"PSEG : STANDARDIZATION OF DATA"

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1.

PSEG is a function of one argument--a region name which comes from REGIONLIST, as created by TOPOLOGIST. When it is done, the following data structure exists. *indicates that the data was already stored correctly when PSEG got it.

REGIONLIST is a list of region names created by TOPOLOGIST. On the property list of each region are the following:

	<u>INDICATOR</u>	<u>PROPERTY</u>
1)	TYPE	REGION
*2)	OUTERBOUNDARY	list of dotted coordinates of region's outer boundary
*3)	NUCLEUS	list of dotted coordinates of region's inner boundary
*4)	HOLES	list of names of holes in region
*4a)	holes	list of dotted coordinates of each hole's boundary
*5)	NEIGHBORS	list of names of region's neighbors
6)	SHAPE	1-atom description
7)	VERTS	list of names of vertices of region
8)	SEGS	list of names of segments of region

VERTEXLIST is a list of all vertex names. On the property list of each vertex are the following:

	<u>INDICATOR</u>	<u>PROPERTY</u>
1)	TYPE	VERTEX
2)	POS	dotted coordinates
3)	REGS	list of name of region to which vertex belongs
4)	SEGS	list of names of segments of which vertex is a vertex
5)	ANGLE	angle in radians with respect to inside of region

SEGMENTLIST is a list of all segment names. On the property list of each segment are the following:

	<u>INDICATOR</u>	<u>PROPERTY</u>
1)	TYPE	SEGMENT
2)	REGS	list of name of region to which segment belongs
3)	VERTS	dotted pair of segment's vertex names
4)	LENGTH	length of segment
5)	DIR	$\frac{\Delta Y}{\Delta X}$

PROBLEMS: As of now, PSEC assumes

- (a) region has only one boundary
- (b) a vertex belongs to only one region
- (c) a segment belongs to only one region

SOLUTIONS:

- (a) will be taken care of in a new PSEC
- (b and c) will be taken care of by later editing routines.